

SAIP2022



Contribution ID: 180

Type: Oral Presentation

Neutron monitors as space weather instruments

Tuesday, 5 July 2022 15:00 (30 minutes)

Neutron monitors (NMs), on the Earth's surface, have been monitoring the near-Earth cosmic ray flux indirectly for nearly 70 years. These monitors do not detect the primary particles flux, but are sensitive to the secondary particles formed in the Earth's atmosphere during nuclear cascades. More recently, these instruments have been upgraded to provide more accurate and robust measurements, and for the data to be available in a near real-time format for space weather purposes. In this talk we discuss new upgrades and/or modifications to the South African NM network, and how these can lead to the effective near real-time monitoring of radiation exposure at e.g. aviation altitudes. We also discuss new research that can be performed with these old but updated instruments.

Apply to be considered for a student ; award (Yes / No)?

N/A

Level for award;(Hons, MSc, PhD, N/A)?

N/A

Primary author: STRAUSS, Du Toit (Centre for Space Research, North-West University)

Presenter: STRAUSS, Du Toit (Centre for Space Research, North-West University)

Session Classification: Astrophysics & Space Science

Track Classification: Track D2 - Space Science